

*CLAIM AMENDMENTS*

1. (Currently Amended) A photoelectric encoder for detecting a movement amount of an object, comprising:

a scale that generates a ~~periodical~~ periodic light-intensity distribution pattern having a ~~predetermined~~ pitch P ~~with irradiation upon radiation~~ of emission light from a light source; and

a plurality of ~~light receiving~~ light-detecting segment groups that are shifted relative to said scale to generate phase signals having ~~predetermined~~ fixed phase differences so that the movement amount is detected based on the phase signals with the ~~predetermined~~ fixed phase differences, wherein a plurality of ~~light receiving~~ light-detecting segments are positioned to have the same phase ~~to form as~~ each of said plurality of ~~light receiving~~ light-detecting segment groups, ~~which includes each group including at least two of said plurality of~~ light receiving light-detecting segments adjacent to each other.

2. (Currently Amended) The photoelectric encoder according to claim 1, wherein said ~~light receiving~~ light-detecting segment groups have ~~predetermined~~ fixed phase differences, and ~~area~~ centers of gravity, on a phase axis, of said plurality of areas of the ~~light receiving~~ light-detecting segment groups having a ~~predetermined~~ fixed relationship in phase difference to each other, are ~~made~~ coincident with each other.

3. (Currently Amended) The photoelectric encoder according to claim 1, wherein said ~~light receiving~~ light-detecting segment groups have ~~predetermined~~ fixed phase differences, and ~~area~~ centers of gravity on a phase axis, of areas of said plurality of the ~~light receiving~~ light-detecting segment groups having a ~~predetermined~~ fixed relationship in phase difference to each other, are arranged symmetrically in position with respect to a center axis of the ~~emission~~ light-intensity distribution pattern.

4. (Currently Amended) The photoelectric encoder according to claim 1, wherein a center distance between the center positions of the ~~adjacent~~ light receiving light-detecting segments located adjacent to each other and having the same phase is equal to the pitch P, and a center distance between the center positions of the ~~adjacent~~ light receiving light-detecting segments located adjacent to each other and located at the respective ends of different light-emitting segment groups having different phases is equal to 5P/4.

5. (Currently Amended) The photoelectric encoder according to claim 1, ~~wherein including, in said light-receiving light-detecting segment groups, a cross-talk preventive portion is integrally formed located in the spaces between the respective adjacent light-receiving light-detecting segments located adjacent to each other.~~

6. (Currently Amended) The photoelectric encoder according to claim 5, wherein said cross-talk preventive portion is ~~formed of~~ a vapor-deposition film member.

7. (Currently Amended) The photoelectric encoder according to claim 5, wherein said cross-talk preventive portion is ~~formed of~~ a signal-light shielding member ~~formed~~ by etching.

8. (Currently Amended) The photoelectric encoder according to claim 1, ~~wherein the number including form of said light-receiving light-detecting segment groups are four that respectively correspond to generate four phase signals, and, when using one of the four phases as a reference phase, the phases of the other three signals are set to 90°, 180° and 270°.~~

9. (Currently Amended) The photoelectric encoder according to claim 1, wherein a width of each ~~light-receiving light-detecting~~ segment is set to approximately 1/2 of the ~~predetermined~~ pitch P.